

ART. XXXIV.—*Description of a New Dragon-fly belonging to the Genus Uropetala Selys.*

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Plate LIII.

THROUGH the much-appreciated kindness of Dr. C. Chilton, Professor of Biology at Canterbury College, Christchurch, I was enabled, during the summer of 1919-20, to spend a few days at the Cass Biological Laboratory. In company with Dr. Chilton and Mr. Charles Lindsay, of the Canterbury Museum, I collected a number of dragon-flies from the streams around Cass; later on I obtained a number of the same species from Arthur's Pass. In both localities a large *Uropetala* was seen flying about, and a number of specimens of both sexes were obtained. At first I took this fine dragon-fly to be *Uropetala carovei* White, recorded from many localities in New Zealand, and also being the only known member of the genus. Later on, however, I obtained specimens of *Uropetala* from Lake Wakatipu, and also from the North Island, which in many characters did not agree with those taken at Cass and Arthur's Pass. It became evident that there were two species of *Uropetala* present in my collections, one of which agreed closely with the descriptions given by White and de Selys for *U. carovei*, while the other was undescribed. It is this latter species which occurs at Cass and Arthur's Pass.

While at Cass we located an area in a small mountain-swamp where the holes made by the larvae of this dragon-fly were abundant. By merely inserting one's fingers into these holes, which are made in peaty soil, and are about $\frac{1}{2}$ in. in diameter, and by working one's hand downwards, enlarging the hole at the same time, until a depth of from 10 in. to more than 1 ft. is attained, the larvae can be felt as hard inert objects at the bottom, and can be hauled out with ease. Unlike the larvae of *U. carovei*, which, as far as my experience goes, are very fierce and liable to snap at one's fingers when handled, these larvae were very inert, and could be handled with safety. As the last three instars were obtained, this habit is not likely to be due to the approach of ecdysis, for more than fifty larvae were taken out and handled. I hope later on to make a careful comparative study of these two larval forms, with a view to the discovery and recording of any morphological differences that may be present. In the meantime, Mr. W. C. Davies, Curator of the Cawthron Institute, has very kindly offered me an excellent photograph of the larva of *U. carovei*, taken from a specimen found in the Wairarapa district, for publication in this paper. From this photograph, which is reproduced in Plate LIII, a very good idea can be obtained of the general appearance of these larvae. As far as I know, no accurate figure has yet been published of the larva of *U. carovei*, and I wish to thank Mr. Davies for this excellent photograph.

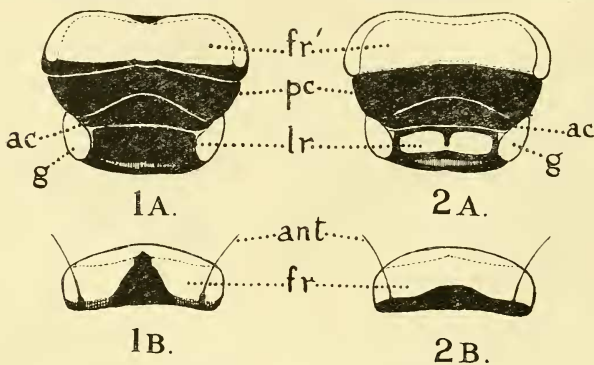
I wish to dedicate this new species, whose description follows, to Dr. Chilton as a memorial of the excellent work which he has done, and is doing, in connection with the Cass Biological Station.

Uropetala chiltoni n. sp.

♂. Total length, 83 mm.; abdomen, 60 mm.; forewing, 49 mm.; hindwing, 47 mm.; expanse, 102 mm.

General shape exactly as in *U. carovei*.

Head.—Eyes dark brown, the inner portion of the orbits blackish, the outer marked with a yellowish line. Occiput broadly yellow, as in *U. carovei*. Vertex black, the three ocelli brown. Frons yellow above, but with the black colour of the vertex encroaching basally for a short distance, as shown in text-fig. 2B; anterior portion of frons broadly yellow, this colour encroaching very slightly upon the upper portion of the postclypeus. Postclypeus and anteclypeus both black; genae yellow. Labrum with black margins surrounding a pair of partially fused subrectangular blocks of yellow, separated above only by a downward-projecting, short, median bar of black. Labium brown. The colouring of the facial portion of the head is shown in text-fig. 2A.



Colour-pattern of head in *Uropetala*.

Uropetala carovei White: Fig. 1A, face; fig. 1B, upper portion of frons.

Uropetala chiltoni n. sp.: Fig 2A, face; fig. 2B, upper portion of frons.

ac, anteclypeus; ant, antenna; fr, upper portion of frons; fr', anterior portion of frons; g, gena; lr, labrum; pc, postclypeus.

Thorax.—Prothorax small, dark brown, hairy. Synthorax blackish brown, with paired dorsal and lateral stripes of yellow, very similar to those seen in *U. carovei*. The dorsal stripes are, however, broader than those in *U. carovei*, and stand closer to one another towards the middle line, leaving a narrower band of blackish brown along the mid-dorsal carina. The metanotum and lower part of the mesonotum are densely clothed with grey hairs, and similar hairs extend down on to the dorsal part of the first abdominal segment, and less abundantly on to the second also. Breast covered with long grey hairs. Legs entirely black. Wings as in *U. carovei*.

Abdomen.—Shape narrow-cylindrical, segments 1-2 broader than the rest. Sides of 1-2 less hairy than in *U. carovei*, the edges of the lateral sheaths bordering the genital fossa almost hairless; in *U. carovei* the hairs on these parts are very distinct. Colour dark brown shading to black, with



Full-grown larva of *Uropetala carovei* White. $\times 2$. From a photograph taken by Mr. W. C. Davies, Curator of the Cawthron Institute.

